WHAT IS CLAYMED IS:

) 1. An apparatus for creating a virtual world database comprising:

receiving means for receiving a pictorial representation of the virtual world; and

grouping means, coupled to the receiving means, for grouping descriptions of the pictorial representation into selected groups.

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- 2. The apparatus according to claim 1 further comprising attribute assigning means, coupled to the grouping means, for assigning attributes to the groups, the attribute means including hierarchy means for selecting a hierarchy for the selected groups.
- 3. The apparatus according to claim 2 wherein the attribute assigning means further comprises constraint assigning means for assigning constraints of motion to the groups.
- The apparatus according to claim 3 wherein the attribute assigning means further comprises color assigning means for assigning color values to the groups.

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The apparatus according to claim A wherein the attribute assigning means further comprises texture assigning means for assigning texture values to the groups.

- The apparatus according to claim 2 further comprising data coupling means, coupled to the grouping means, for coupling real world data to the groups.
- An apparatus for creating a virtual world comprising:

receiving means for receiving a pictorial representation of the virtual world;

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grouping means, coupled to the receiving means, for grouping descriptions of the pictorial representation into selected groups;

attribute assigning means, coupled to the grouping means, for assigning attributes to the groups, the attribute means including:

> hierarchy means for selecting a hierarchy for the selected groups;

constraint assigning means for assigning constraints of motion to the groups; rendering means for rendering the virtual world from the groups.

add B1

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